

Notice of Allowability

Application No.

09/801,031

Examiner

James C Kerveros

Applicant(s)

WALKER ET AL.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to AMENDMENT filed 6/10/2004.
2. ☒ The allowed claim(s) is/are 1-34.
3. ☐ The drawings filed on ___ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20040818.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Attached Drawings.

DETAILED ACTION

1. This Office Action is in response to Amendment filed 3/6/2001.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ian Hardcastle, attorney for Applicant, on August 18, 2004.

The application has been amended as follows:

The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

Attached FIGS 1, 2A, 2B, 2C and 3 were designated by a "Prior Art" legend, in accordance with MPEP § 608.02(g). In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Allowable Subject Matter

3. Claims 1-34 are allowed.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance:

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The prior arts of record taken alone or in combination fail to teach, anticipate, suggest or render obvious the claimed invention recited in the independent claims below:

Claims 1-10 and 19-26 recite a method and a data communication system having a built-in self-test facility, the method including the steps of scrambling a seed payload field using a presettable scrambler to generate fields of a test sequence and detecting the differences between recovered test sequence fields and the seed payload field as errors, recited in the independent claim 1.

The system includes a presettable scrambler and an error detector connected to the output of the presettable descrambler, the error detector operating to generate an error indication when a recovered test sequence field output by the presettable descrambler differs from the seed payload field, recited in the independent claim 19.

Consequently, independent claims 1 and 19 are allowed over the prior arts of record. Claims 2-10, 20-25 are directly or indirectly depended upon claims 1 and 19 and therefore are also allowable.

Claims 11-15 and 27-31 recite a method and a data transmitter for generating a test sequence in the data transmitter, the method including the steps of scrambling payload fields using the scrambler to generate respective scrambled payload fields in a normal operating mode, and scrambling a seed payload field using the scrambler to generate fields of the test sequence in a self-test operating mode, recited in the independent claim 11.

The data transmitter includes a scrambler that operates in a normal operating mode to receive payload fields and to scramble the payload fields to generate respective scrambled payload fields for transmission, and that alternatively operates in a self-test operating mode to receive a seed payload field and to scramble the seed payload field to generate fields of a test sequence for transmission, recited in the independent claim 27.

Consequently, independent claims 11 and 27 are allowed over the prior arts of record. Claims 12-15, 28-31 are directly or indirectly depended upon claims 11 and 27 and therefore are also allowable.

Claims 16-18 and 32-34 recite a method and a data receiver, the method including the steps of descrambling received payload fields using a descrambler in a normal operating mode, descrambling the received test sequence fields using the descrambler to generate respective recovered test sequence fields in a self-test operating mode, and detecting differences between the recovered test sequence fields and the seed payload field as errors, recited in the independent claim 16.

The data receiver includes a descrambler operating in a normal operating mode to descramble received payload fields to generate respective recovered payload fields, and alternatively operating in a self-test operating mode to descramble received test sequence fields generated by scrambling a seed payload field generator to generate respective recovered test sequence fields, and an error detector operating to generate error indications when the recovered

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test sequence fields differ from the seed payload field, recited in the independent claim 32.

Consequently, independent claims 16 and 32 are allowed over the prior arts of record. Claims 17-18 and 33-34 are directly or indirectly depended upon claims 16 and 32 and therefore are also allowable.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Kimmitt (US 6618395) discloses a transmit portion (FIG. 3), including the claimed limitations of scrambler 44 and a seed register 42 to generate test patterns and a receive logic (FIG. 5) including a descrambler 94 for descrambling the received test sequence. The Kimmitt reference taken alone or in combination fail to teach, anticipate, suggest or render obvious the claimed limitation of detecting differences between the recovered test sequence fields and the seed payload field as errors.

8. Perlman (US 6742182) disclose descrambling a scrambled television signal using a cable box for authenticating the right of a user to descramble and view scrambled television channels by periodically examining all the television

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channels output by a cable box, where the time base of the television channel output by the cable box is compared to the time base of the same channel tuned and descrambled with the set top box. If the time bases match, then the right of the user to descramble and view that particular channel is authenticated. The Perlman reference taken alone or in combination fail to teach, anticipate, suggest or render obvious the claimed limitation of detecting differences between the recovered test sequence fields and the seed payload field as errors.

9. Amrany (US 5530959) discloses a self-synchronizing scrambler / descrambler without error multiplication, including a scrambler which is "seeded" with predetermined data during a start-up time interval, where in this interval, the predetermined data or seed is stored in the scrambler and descrambler. After this start-up interval, the scrambler and descrambler each operate in a "closed-loop" mode wherein the presence of errors in the received scrambled data does not produce error multiplication. The Amrany reference taken alone or in combination fail to teach, anticipate, suggest or render obvious the claimed limitation of detecting differences between the recovered test sequence fields and the seed payload field as errors.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James C Kerveros whose telephone number is (703) 305-1081. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

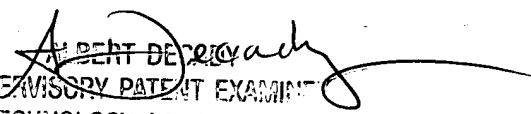
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

U.S. PATENT OFFICE
Examiner's Fax: (703) 746-4461
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Date: 20 August 2004
Office Action: Allowance

By: 

James C Kerveros
Examiner
Art Unit 2133


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